

The Teachers' College Journal

CONTENTS

The Philosophy of Indiana State Teachers' College	N. Moore	131
The Philosophy of Instruction: Underlying the Professional Training of Teachers in Normal Schools and Colleges	W. H. Stevens	135
Philosophy of the Indiana State Teachers' College	R. W. Johnson	139
Students See Us	W. H. Stevens	141
Philosophy of Instruction: Effects of Indiana State Teachers' College	R. W. Johnson	143
Use of Objective Tests as a Means of Evaluating Instruction at the College Level	J. C. Johnson	145
and the Reading Table		

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The Philosophy Of Indiana State Teachers College

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The topic given me for this discussion is a most interesting one but it is somewhat hard to set in definite terms what the philosophy is that is the foundation of this institution—the philosophy that has guided it through the years and the philosophy that today is, or ought to be, at the bottom of every part of the work that is given us to do.

The state of Indiana has the proud distinction of giving early attention to the training of teachers. At a special session of the legislature of the state, a session that began its deliberations on November 13, 1865, the legislators took time to lay the foundation of this institution and the foundation of all teacher training in Indiana. We must recall that the state had just been doing its part for five years in putting down the Southern rebellion against the Federal authority. The distress attending the Civil War had not yet sub-

sided, but the people were interested in education. At a time when the efficiency of a public school system was at a very low ebb and when there was much indifference to education the legislators turned their attention to the matter of getting better teachers in the schoolrooms of the state. It was a long time, of course, until the new school could get started and until the institution could make its influence felt through the preparation of teachers for Indiana schoolrooms.

The particular act of the legislature bearing on this matter is entitled, "An Act to Create a State Normal School, and Declaring an Emergency." The act was approved December 20, 1865. The emergency statement meant that the act was in force as soon as the Governor signed the bill. This he did promptly. The act went into effect December 20, 1865 but it was not until a little more

than four years later, January 6, 1870, that students were actually received in the little building that stood where this main building now stands.

The act referred to reads in full as follows:

"Section 1. Be it enacted by the General Assembly of the State of Indiana, That there shall be established and maintained, as hereinafter provided, a State Normal School, the object of which shall be the preparation of teachers for teaching in the common schools of Indiana.

"Sec. 2. In order to the establishment and maintenance of such a school, the Governor shall appoint, subject to the approval of the Senate, four competent persons, who shall in themselves, and in their successors, constitute a perpetual body corporate, with power to sue and be sued, and to hold in trust all funds and property which may be provided for said Normal School, and who shall be known and designated as the 'Board of Trustees of the Indiana State Normal School.' The Superintendent of Public Instruction shall be ex-officio member of this board.

"Sec. 3. That two members of this board shall retire, as may be determined by lot or otherwise, in two years after their appointment; and the remaining two in four years; whereupon the Governor, subject to the approval of the Senate, shall appoint, as aforesaid, their successors for a period of four years. All vacancies occurring in said board from death or resignation, shall be filled by appointments made by the Governor.

"Sec. 4. Said board of trustees shall meet on the second Tuesday in January, 1866, at the office of the Superintendent of Public Instruction, and shall organize by electing one of their number President and one Secretary, each for a term of two years; and at this or at a subsequent meeting, they shall elect some suitable person outside of their number as Treasurer, who shall, before entering on duty, give bond in such sum as they may prescribe.

"Sec. 5. Said board shall, at its first meeting, open books to receive from different parts of the State proposals for donations of grounds and buildings, or funds for procuring of grounds and erection of buildings for said Normal School; also, they may, if deemed needful, at this or a subsequent meeting, appoint one of their number, or other competent person, to visit different parts of the State and explain the nature and objects of said Normal School, and to receive proposals of donations of buildings and grounds, or of funds for the same.

"Sec. 6. Said board shall locate said school at such place as shall obligate itself for the largest donation: Provided, first,

That said donation shall not be less, in cash value, than fifty thousand dollars: Second, That such place shall possess reasonable facilities for the success of said school.

"Sec. 7. Said board shall immediately after the selection of place of location, proceed to let a contract or contracts for the erection of a building, to the lowest responsible bidder: Provided, That no member of the board be a contractor for building, or for furnishing any material therefor.

"Sec. 8. Said board shall organize in connection with the Normal School, in the same building with the Normal School, or in a separate building, as they shall decide, a Model School, wherein such pupils of the Normal School, as shall be of sufficient advancement, shall be trained in the practice of organizing, teaching and managing schools.

"Sec. 9. Said board shall prescribe the course of study for the Normal School, shall elect the instructors, and fix their salaries, and shall determine the conditions, subject to limitations hereinafter specified, on which pupils shall be admitted to the privileges of these schools.

"Sec. 10. The following conditions shall be requisite to admission to the privileges of instruction in the Normal School:

"First. Sixteen years of age, if females, and eighteen, if males.

"Second. Good health.

"Third. Satisfactory evidence of undoubted moral character.

"Fourth. A written pledge on the part of the applicant, filed with the principal, that said applicant will, so far as may be practicable, teach in the common schools of Indiana a period equal to twice the time spent as a pupil in the Normal School: together with such other conditions as the Board may from time to time impose.

"Sec. 11. Tuition in the Normal School shall be free to all residents of Indiana who fulfill the four conditions set forth in section 10 of this act, and such other conditions as the Board may require.

"Sec. 12. A high standard of christian morality shall be observed in the management of the school, and so far as practicable, be inculcated in the minds of the pupils, yet no religious sectarian tenets shall be taught.

"Sec. 13. Said Board of Trustees shall biennially make a report to the Legislature, setting forth the financial and scholastic condition of the schools; also making such suggestions as in their judgment will tend to the improvement of the same; and the years in which there is no session of the Legislature, they shall make a report of the scholastic condition of these schools to the Governor on or before the first Monday in January.

"Sec. 14. The President of the State University, the President of the Agricultural

College, and the Chief Justice of the Supreme Court of Indiana, shall constitute a Board of Visitors, who shall, in a body, or by one of their number, visit said schools at least once each term, and witness the exercises, and otherwise inspect the literary condition of these schools, and at the close of each academic year, they shall make a report to the Board of Trustees.

"Sec. 15. As soon as the Normal School is open to receive students, the Board of Trustees shall inform the Superintendent of Public Instruction, whereupon he shall, in his next apportionment of the school revenue for the State, deduct five thousand dollars, and semi-annually thereafter he shall deduct the same amount, which shall be set apart, and be known and held as the Normal School Fund. This money shall be paid out only on the warrant of the Auditor, drawn on the order of the Board of Trustees.

"Sec. 16. The members of the Board of Trustees shall be allowed five dollars for each day's service rendered, also traveling expenses, to be paid out of the State treasury.

"Sec. 17. Said Board shall pay their treasurer, and their agent, if such be appointed as provided for in section fifth of this act, such sums for their services as shall be reasonable and just.

"Sec. 18. Whereas an emergency exists for the immediate taking effect of this act, it is hereby declared that it shall take effect and be in force from and after its passage."

Such is the foundation law for this school. You will note that Section 1 states that the object of the new state normal school "shall be the preparation of teachers for teaching in the common schools of Indiana." Many years later the legislature included the high schools in the same classification with the grade schools so that the whole system is now *The Indiana System of Common Schools*. Under this original statute and later statutes this college prepares teachers for all grades of licenses and for all schools with the exception of kindergartens. The reason for our never having taken up this latter work is that kindergarten schools are few and the supply of teachers has always been greater than the demand.

There was never any doubt in the

minds of the legislators that the school should do a definite work in the preparation of candidates for teaching. These candidates, if female, were to be at least sixteen years of age, and if male, at least eighteen years of age. They were to have good health and a special sentence provides that they should be of undoubted moral character. The candidates were also to sign a blank that they would teach in the common schools of Indiana for a period equal to twice the time spent as students in the institution.

An important section was Section 12 which as read above provides, "A high standard of christian morality shall be observed in the management of the school and so far as practicable be inculcated in the minds of the pupils, yet no religious sectarian tenets shall be taught." Those old legislators intended that the graduates of this school should be right as to christian morality. This act has not been repealed and it is the duty of this school to put the seal of its approval on only those candidates for graduation who are clean and straight and who intend to give their best to the noble work of teaching.

This institution, of course, was founded by an act of the legislature and this means that the nature of the school can be changed by an act of the legislature and that new conditions can be attached to professional teaching. In 1929 the legislature passed the law that changed the name of this school and that made certain other changes but the fundamental principle of teaching being done by high-minded and clean-minded young people was not altered in any way.

The act of 1929 provides specifically that all laws of general nature

referring to Indiana State Normal School shall be deemed to refer to both the Indiana State Teachers College and the Ball State Teachers College. The legacy of high moral character and of christian morality is still ours and both these schools are under obligations to see that the best possible work is done by young people who are in earnest.

The thought arises in this connection that possibly some of the social affairs that occasional students, at least, indulge in, that certain indulgence in some of the social vices and similar things are not included in the general idea of christian morality. Should our students, for instance, be allowed to indulge in the tobacco habit and should certain people in positions connected with the school be allowed to set example for them? Times change and customs change but there is every reason to believe that the christian morality of 1865 should be the christian morality of 1931.

It may be, and is, somewhat off the question, but since I have quoted the first law in regard to establishing this institution it may be of interest to know something of the conditions of the second enactment of the legislature in regard to organizing and sustaining this school plant. This act is as follows:

"Section 1. Be it enacted by the General Assembly of the State of Indiana, That in order to carry out the provisions of an act entitled 'An act to creat a State Normal School and declaring an emergency,' approved December 20, 1865, and to establish said Normal School, and erect the buildings necessary for said Normal School, there shall be appropriated and paid out of the Township Library Fund, assessed and collected for the years 1865

and 1866 in pursuance of sections 131 and 132 of an act entitled, 'An act to provide for a general system of Common Schools, the offices thereof, and their respective duties and matters properly connected therewith, and prescribing the fees for certain officers therein named, and for the establishment of, and regulation of township libraries, and to repeal all laws inconsistent therewith, providing the penalties therein prescribed,' approved March 6, 1865, the sum of fifty thousand dollars, if said Library Fund be sufficient in amount, if not, out of any other funds in the Treasury not otherwise appropriated, which said sum shall be drawn from the Treasury upon the order of the Board of Trustees of the Indiana State Normal School, and expended under their direction and supervision for the purpose of erecting the building or buildings necessary for the said State Normal School.

"Sec. 2. It is further provided, That no part of the above appropriation shall be paid until the plan, design and specifications of the said Indiana State Normal School, heretofore adopted by the Board of Trustees of said State Normal School is filed in the office of the Auditor of State, which said plan, design and specifications of said Normal School are hereby approved and adopted as the plan, design and specifications of said Normal School, and further provided that no part of said appropriation shall be drawn or paid to the Board of Trustees of said Normal School, by the proper officers of State, until the opinion of the Attorney General shall have been filed with the Auditor of State, showing that the title to the land, donated by the City of Terre Haute, has vested, by a good and sufficient deed in fee simple to the said Board of Trustees of said Normal School, and that the city of Terre Haute shall further undertake and enter into an agreement to forever maintain and keep up one half of the necessary repairs incident to keeping in proper order the building or buildings and the grounds of the same, which said obligation or agreement shall also be filed with the Auditor of State, and when being so filed, the said Auditor is hereby authorized to draw his warrant upon the Treasurer of State for the sum so appropriated as above enacted, and not otherwise.

"Sec. 3. Whereas the Board of Trustees of said Normal School have made contracts for material, and offered bids for labor in erecting said institution, therefore an emergency exists for the immediate taking effect of this act, and the same shall be in full force and effect from and after its passage."

The Philosophy Of Instruction Underlying The Professional Training Of Teach- ers In Normal Schools And Colleges

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Instead of discussing the subject so adequately presented at the last faculty meeting—the philosophy underlying the creation of the normal school by legislative enactment—to which nothing can be added or subtracted, I have elected to discuss the philosophy, or philosophies, of such professional training of teachers as conceived and exemplified by the teacher-training institutions established in accordance with that act of the legislature.

During all these years, from the inception of the normal school idea in 1812, as set forth by Professor Denison Olmstead of Yale, in his commencement address, *The State of Education in Connecticut*, to the report to the Carnegie Foundation in 1920 entitled, *The Professional Preparation of Teachers for American Public Schools*, by Learned, Bagley, McMurry, Strayer, Dearborn, Kandel, and Josselyn, there has been little variation in the normal school's understanding and execution of its unique job.

Dr. E. D. Randolph, professor of education in the University of Washington (state) writes in 1924: "The establishment of the normal school, however, brought into relief a theo-

retic rivalry of knowledge and technique, and the opposing evaluations of those elements of the teacher's equipment inaugurated the central conflict in shaping the curriculum: namely, the struggle of 'academic' versus 'professional.' "¹

This projected into the educational field a problem that normal schools must solve. It was universally admitted that the teacher must be master of his subject matter, and in addition, must be trained in method of presentation. The first normal schools conceived their function to be the latter. Consequently, little or no stress was put upon the academic subjects except in so far as they were "reviewed" for clarity and definiteness of presentation.

The normal schools finding the knowledge of subject matter defective as to quantity or quality, incorporated academic courses into their curricula. Protest was raised against this as a "duplication of instruction" and was opposed by many of the colleges and by the tax-payers.

This question of the restricted function of the normal school was

¹E. D. Randolph, *The Professional Treatment of Subject Matter*, (Baltimore: Warwick and York, 1924), p. 13.

bitterly fought out between 1837 and 1866. About this latter date, its function as a professional, technical school became defined and to a great extent crystallized, though among the teachers in liberal arts colleges, and the students trained therein who eventually drifted into teaching—the die-hards—there persist to this day these heretical doctrines: that any one who knows his subject matter can teach it; and that the only training necessary to be a good teacher is to be taught by a good teacher, for one will then teach as he has been taught.

By 1866 the function of the normal school had become crystallized. In the report of the Commissioner of Common Schools of Ohio to the General Assembly in 1866, one reads: "While the one single object is to increase the teaching power of the student, the exercises have practically a four-fold aim:—

"1. To impart to the student a thorough teaching knowledge of all the branches ordinarily taught in common schools. This includes not only the mastery of the subjects as knowledge, which is the first requisite for successful teaching, but also the mastery of them as subjects to be taught to others. This is the one distinctive idea that runs through every lesson and exercise.

"2. To impart to the prospective teacher a practical knowledge of the guiding principles of his art, and to enable him to reduce these principles to something like a philosophical system. In other words the second aim is to teach the science of education.....

"3. To impart to the teacher the best methods of instruction and government, including methods specially applicable to each stage of the child's

progress and to each branch of knowledge,

"4. To impart to the student skill in the art of teaching by an application of his knowledge of principles and methods in actual practice. For this purpose most normal schools have a model or experimental department, in which students practice under the supervision and criticism of a skilled teacher."

As is apparent from this report, the professionalizing of subject matter, training in the philosophy of education, the science of education, methods of presentation of subject matter, and practice teaching constituted the unique function of the teacher-training school—of the normal school.

As growing out of the conception of the methods of presentation of subject matter, a need for psychology was keenly felt. At first this was merely the psychology involved in the learning of specific subject matter as for example, the psychology of learning geography. Somewhat later upon the discovery of the great similarity of the learning process in any subject matter the study of psychology as a science was added to the necessary equipment of the teacher for his job. At the present it is, probably, the most nearly dominant subject in the curriculum of normal schools — teacher - training institutions; for upon the conception of mind and its method of functioning depend the efficiency of the teaching of all the other subjects of the curriculum as well as those peculiarly professional.

Introspective psychology dominated the philosophy of teacher-training up until 1912. Its fundamental concepts were:

"Consciousness is the subject matter of psychology."

"The mind is a spiritual entity functioning through the brain.—Dualistic conception."

"The mind acts as an entity in three specific and differentiated activities—knowing, feeling, and willing."

It was to be trained in these faculties by the subject matter of the various studies in much the same manner as the scythe is made sharp by the whetstone. The result—a trained mind—was considered the essential difference between an educated and an uneducated man.

Whatever the material upon which one's wits were sharpened, the result was an incisive mind fitted to sever the Gordian knot of any tangled problem. Later this power was said to be secured by "transfer of practice." At this stage of the process theory dominated method and little resort was had to investigation of the actual facts in the situation.

This psychology concerning itself with consciousness and introspection—useless and hazy concepts for the practical work of teaching—faced many problems it could not solve, and so projected "dualism"—a mind-body entity—into psychology. It conceived the idea "soul" to take care of these otherwise insoluble problems.

Thought was a non-material object, hence must be generated by a non-material cause; thus the soul solved all the abstruse problems that confronted the educator. Discovered and analyzed by introspection, or race consciousness, this approach to the study of behavior of the human animal in the learning process, is considered unscientific and illusory.

Introspection cannot be made the court of last appeal because it is always individual and unique, hence unreliable. The scientific method demands this universal condition, that any element isolated in one laboratory can be isolated, observed, and studied in any other laboratory. This reduces the subject of psychology to the observable facts of human behavior under set stimuli.

So, the substitution of the "conditioning of reflexes or responses" for the "training of the mind" revolutionizes the processes of education in the light of the new concept of the subject matter of psychology. All training becomes specific; there is no carry over practice between unrelated subject matters; there is no such entity as a trained mind capable of functioning equally well in any field of knowledge; there are no faculties, nor mind, nor soul, only conditioned responses. This concept of psychology and the laws of the learning process tends to exalt the teacher and the power of environment and minimizes the power of will—choice; it invalidates to a great degree the philosophy of human responsibility and consequently of rewards and punishments, praise and blame.

Education in a teacher-training institution becomes a matter of conditioning the prospective teacher's reflexes and responses, so that he will function successfully in the presence of the varied stimuli of the schoolroom. The normal school must condition him in desirable reflexes, and uncondition him in undesirable ones. Not only must his nervous organism be conditioned to right responses, but, also, his automatic organism—the viscera—stomach, intestines, breathing, circulation—to right emo-

tional reactions. The problem of education becomes much simpler, because concerned with the tangible, observable, phenomena of human behavior in the presence of observable posited stimuli, the only difficulty being that these responses many themselves become stimuli.

Since these responses are conditioned by previous reactions, which differ in each individual according to his past reactional history, one is once more involved in an attempt to predict the nature of a present reaction when he is ignorant of the past reactional experiences that give it meaning or validity.

This problem of how to train the teacher professionally so that he will function expertly on his job is no easy one to solve. My impression is, with all the light research, investigation, and the newer psychology have thrown upon the subject, we are still groping in the dark. Having cast aside the old philosophical conception, educators are, as yet, not agreed upon any one philosophy of education that will unify the activities of teacher-training institutions. Though there has been practically little change in the ends that such an institution should achieve, the means of achieving them are still to a very great extent in the empirical stage.

However, at the present moment there looms upon the horizon the dawn of another psychological sun, under whose beneficent rays a new philosophy of education, and a modified method may sprout and flourish. In this, as in every field of human activity, the fundamental error is to think that the last word has been said on either the nature of the human entity, or, since the two are inextric-

ably cognate, the method of educating it.

President Parsons in an address before the N. E. A. in 1903 succinctly stated the objectives of a teacher-training institution which as yet have not been abrogated.

"A teacher's knowledge of a subject of instruction includes, in addition to a thorough, comprehensive knowledge of its subject matter—its materials—in their true organization, first, a clear view of the mental processes involved in thinking the subject; and second, a profound consideration of the entire subject as an educational agency, this latter including its value as information giving, as conferring discipline, as revealing more or less fully, in some phase or phases, the abiding, reasonable order of the world.

"To prevent any possible misunderstanding, let it be added that the professional knowledge herein urged is not supposed in any way to take the place of scholarly attainments. Method cannot be, is not, offered as a substitute for scholarship. The doctrine asserted is that scholarship alone does not qualify for the work of the schoolroom, that a professional knowledge of subjects is a valid and necessary addition to this, and that it consists, fundamentally, in the two phases of study outlined, first, the processes of mind by which the subject matter is learned; second, the educational value of the materials thus organized."²

The latest pronouncement upon this subject, as late as 1920, differs
(Continued on Page 170)

²W. W. Parsons, "Does the Teacher's Knowledge of a Subject Differ from the Scholar's Knowledge?" *Proceedings of the N. E. A.*, 1903, p. 554.

The Philosophy Of The Indiana State Teachers College

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The philosophy of our own teachers college should not, in any material way differ from that of any other teacher-training institution. Therefore, what is said is not meant to apply to this institution only, but rather to all teacher-training institutions. It is clear that the background of any institution engaged primarily in the development of any particular professional skill must conform to at least three conditions:

(1) In the first place the background and method of training must conform to the best theory and practices in the particular professional field under consideration. To secure agreement to this statement is undoubtedly easy. To agree as to what the best theory and practices are is quite another matter.

(2) In the second place there are some general or extra-professional considerations which every individual should possess irrespective of the occupational field in which he is to engage. Cox, in his *Curriculum Adjustment in the Secondary School*, enunciates a principle of curriculum construction which may be modified slightly to suit the teachers college situation. As he states it, it is: The secondary school program of studies must be so conceived and operated as to reinforce, guide, and direct the activities of pupils, both within the school and in relation to other edu-

cational activities outside the school. Modified, it becomes: The teachers college program of studies must be so conceived and operated as to reinforce, guide, and direct the activities of students, both within the college and in relation to other educational activities outside the college. This is fundamentally Briggs' dictum that all should be prepared "to do better those desirable things that they will perform anyway." Into this type of achievement will be thrown those bodies of knowledge that are not professional in their character, but are still just as important as is the professional because some of them are cultural in their character; because others are practical, though not practical in the immediate professional field; because others are informational; because still others lead to certain types of appreciations not otherwise acquired; and yet others lead to integrations in and of one's mental life, such integrations not being possible without achievements other than those in the purely technical and professional materials. As a professional school for teachers we may well follow a parallel problem in medical education. The six or seven year's work required in the latter profession has been almost wholly professional and technical. Just now there is a considerable revulsion of feeling against

this plan in medical circles. The medical profession is beginning to see that the physician and the surgeon must be human along with the other qualities which they must possess. So in the acquirement of teaching skills there must also be an acquirement of culture mass, of a whole-souledness, of a personality that does not set the possessor off from, but that ties the possessor to, humanity. Luckily with two or three majors in the teaching field, one or more of these majors is apt to furnish at least a nucleus of this type of achievement. But as I see the problem, there is considerable evidence which warrants one in believing that there are types of culture, matters of practical importance, fields of information, springs of appreciation, and integrations that many are not acquiring more than mere smatterings of. Some one says that this problem smacks of the old type discipline-culture theory. If that is the only argument that may be urged against the program, I am not much perturbed.

(3) In the third place, there are those individuals in all colleges—in fact everywhere and at all times—who need types of treatment and training that are peculiar to each individual. This only puts in another form the doctrine of individual differences. Or, to put it in a slightly different form, it becomes an argument against rigidly standardized, stereotyped types of work. Why two students on the same course should be required to take identically the same subjects may be a little difficult to explain. On the other hand, it does not mean large or even considerable freedom of election by subjects. The latter leads to the hunt

for snap courses and professors. *But it does mean that a most searching analysis shall be made of each and every student to the end that his needs and his bents shall be discovered and that both needs and bents shall then be ministered to.* This involves not a record which begins with the student's freshman life, but there is need for a personal history as far back as it can be traced. No clinician who deserves the name begins with the here and the now or even begins with present symptoms and pains. What lies back of these is the important matter. The physical, the social, and the moral inheritances need to have all obtainable light thrown on them. How many colleges know anything about a student's background other than his name, his father's name and occupation, and his post office together with a few other insignificant facts? Far too few!

To enumerate these three points, they may be stated as follows: The three backgrounds of philosophy of a teachers college are: to train the prospective teacher into proper relationship with his profession and with his professional group; to train the prospective teacher into proper relationships with society and its institutions; to train the prospective teacher into proper relationships with himself. These readily become the professional contact, the sociological contact, and the biological contact or contact with one's self.

Such statements as these do involve a very serious error, which I hasten to acknowledge. One is never trained professionally until the sociological and biological backgrounds are integrated with the professional; one is never trained soci-

ologically until the professional—or occupational—and the biological are integrated with the sociological; one is never trained biologically or personally until the sociological and the occupational become integrated with and become constituent parts of the biological organism. There is no such thing as a dualism existent among these three. Nevertheless they are a trinity which has been, in too many instances, treated in a trinitarian way instead of being treated in a unitarian way. Danger thus lies in departmentalization unless all the component departments in a system are in fundamental agreement on the philosophy of training and—what is even more important—unless all are working cooperatively in the light of the accepted philosophy to render it functional.

These points may be translated into still other terms: first, the viewpoints of the professional department; second, the viewpoints of all other departments than the professional and of those enumerated under the next point; third, the viewpoints of the division or department of health and medical service of physical education and of a division of personnel service. I suspect that if my classification is understood, each department will see that the same universal principal *should* obtain in our philosophy that obtains in the sociological work which has verily become a world of interdependencies. Some one says: "None is independent; none is dependent; all are interdependent." It simply brings back the good old biological concept of the organism. No single system of an organism can boast of pre-eminence, but must accept as a working principle that whatever the in-

dex of quality of any one system is, that same index is a reasonably accurate measure of the quality of all other systems. Just here then lies one danger of extreme specialization in the teachers college in any one of the contacts already noted.

Something of a hue and cry has been raised in many quarters—and correctly so—with reference to the need for professionalized subject matter. It is certainly well to give some measure of this slant to content. But it may just as well be asserted that there is an urgent need for "subject-matterizing" the professional courses. Again, the interdependency of the two. Every possible means should be brought to bear on the professional department as well as on the content departments to the end that the student will see in the first department *good teaching and the application of the principles of teaching to specific fields of content* and in the latter departments that he will see the material presented through the agency of teaching that is controlled by good theory. Courses in education are too often fruitless either for content or applicability. So I maintain that educational principles should be "subject-matterized" even as content courses should be professionalized.

But to return to the first of the three guiding principles for an application or two. From Tennyson's *Ulysses* there comes:

"I am become a name:
For always roaming with hungry heart
Much have I seen and known,—cities of man
And manners, climates, councils, governments,
Myself not least but honored of them all,—
And drink delight of battle with my peers
Far on the ringing plains of windy Troy
I am a part of all that I have met;
Yet all experience in an arch where-through,

Gleams that untravell'd world whose margin fades
Forever and forever when I move."

Byron says about the same thing:

"I live not in myself but I become a portion of that around me."

But why the poetry? Simply to get a moral. The teachers college turns out in considerable measure just what it itself is. As a part of the philosophy of the institution it is true that teaching must be great, if, in any considerable measure it turns out great teachers. No one rises higher than an institution through the influence of the institution itself. True some become greater than alma mater but they do so in spite of alma mater. The quality of teaching—and that is far more than just techniques—is the motive force of a teacher-training institution. Whatever is done on the instruction level alone is short of the mark by just this important *over margin* of teaching. There is made no contention that instruction is not necessary. That is the foundation of the whole. The question is whether teaching as a fine art dominates the teaching of each instructor and of each field of content or whether the act of teaching is on the artisan level. In these days of scientific education, the artisan level is far too often the conceived level—though falsely conceived even in an age of science—of teaching. Science teaches principles of organization and develops content but usually lacks something that, were this something present, would transform the presentation from a static fact to a vital dynamic fact. Any one who has listened to Dr. David Worth Dennis lecture on science knows what is meant. Putting teaching on a scientific basis may

leave a very fundamental activity to be performed. There is in the Catholic version of the Bible the following in the twelfth chapter of Daniel: "They that are learned shall shine as the brightness of the firmament and they that instruct many to justice as stars for all eternity." Educational hocus pocus? I sincerely hope not. Make teaching not good alone but powerful.

There next comes to my mind the problem of how to improve teaching at the college level. We all know the oft-repeated statement that the quality of teaching is in inverse ratio to its level. I believe this is true in a large measure. But if true what can an institution do? We might face the problem as candidly and as openly as has the University of Minnesota and try some experiments in the teaching field. We also might acknowledge that if supervision is good for many elementary teachers—as it certainly is—there is little doubt that it would be helpful on the college level. The major point is that the teachers college should be the home of great teaching and that this vital process in the functioning of such a college should not be left to chance so much as it is. Supervision is as sadly understood by the college teacher as by any one in the teaching game. When mentioned in most college faculties, it is too often given the "snoopervision" interpretation. Some professor at once remarks, "I do not want any one telling me how to teach." It would be almost as unwise to remark that, "I don't want a doctor telling me how to order my living." Modern supervision has ceased to be a matter of turning out cut-and-dried directions for choosing content and for present-

ing it. It is now a matter of a helpfulness in doing a given bit of teaching better, of approaching a problem experimentally and of divesting one's self of the notion that the last—and best—word has already been said with reference to method. Good supervision will give one an abundant teaching life. It will not cramp one's ability to do artistic work. It gives proper weight to factors of personality in teaching. It wants the best results obtainable. We accept with alacrity the pronouncement of a trained scientist. But we are not even acknowledging that a better way of teaching than our own individual way exists. Is this an open-minded, scientific attitude?

In the next place, Roosevelt's homely political philosophy of the square deal has a finer fruitage in the school than in any other social institution. The child in the home may accept a non-square deal because of parental reverence; the individual in the church may accept a "rap" because of the authority of that institution. The school, however, is not the parent but simply partially *in loco parentis* and universal education is institutionally far too young to have given it the reverence that the church has accorded to it. To me this means that in these days of standards and of standardization, this mere bugaboo of authority is far too important.

This may be the day of the educational and moral muck raker. Be that as it may, the attention of thinking people seems to be rather centered on the quality of the moral life of our people, and the young people are a part of the whole people. We have depended on the by-product theory of moral culture. This seems to have proved to be an insufficient

theory. Young teachers need more than certificates of good moral character. They need the real thing itself. The day is past when the certificate of moral character which was furnished by all applicants for a saloon keeper's license, by all lawyers seeking admission to the bar, and by all applicants for a teacher's certificate can be considered other than a joke. To be classified with either of the other occupations is a species of reproach in itself. Our definition of morals has, moreover, changed markedly. To study badly or not to study at all is immoral. To fiddle away one's time and to run a "sandy" are immoral. Not to know how to study and how to use one's time is, at least, unmoral. Do we make proper provision for such situations? No. In the main we blithely shed the problem as the duck the rain by saying that the high school should have furnished these fundamental habits. In fact, we act as though we believed that the college problem is—in the language of Glenn Frank—a problem of "stuffing." We expect saltatory development and acquirement to be the ruling laws. At some time before the student reaches college the mental processes should have been fully matured and tempered and should now be ready to cut through any problem. This is not true. Education is not an acquirement, but an acquiring. We have the same gravity of problems on our level that the junior high school has on its level and need to face this fact as a part of our philosophy of learning. What can we do? Without stopping to discuss the financial problem the answer is to have organized the studies of personality traits and to have sympathetic counselors meet-

ing all who as a result of such studies seem to need expert attention. The college of the future will be much more definitely clinical—though not sordidly or pathologically so—than the present day institution is. The educational problems of the individual are very frequently solved in class. To meet the need for such clinical or personnel workers, an institution might well increase the size of its classes to compensate for the addition of a corps of personnel workers.

The philosophy of experimentalism should be given a wider usage in all teacher training. This does not involve the dropping of all anchors, but within the radii determined by the strength of the anchorage it does suggest that there may be much experimentation that is both safe and highly productive. State institutions should be manned by faculties that have such qualities of mind that render experimentation distinctly non-dangerous. If they do not, then, in the words of President Chase of the University of Illinois:

"Either they (the educational institutions) must accept the challenge which the public interest in education has thrown to them and do their utmost to deal with the vast and complex problem of popular higher education, or they will retreat from reality into an academic world that sighs for simpler problems and less varied tasks, that manifests impatience with all but superior students and traditional ideas, only to waken to the hard fact, when it is too late, that the public demand for higher education is strong enough to build up other types of institutions to meet its needs of the quotation." The application is, for the present purpose, that if a faculty does not

bend itself to experimentation the public should get a faculty that will be just as willing to experiment educationally as the experiment station expert is willing and eager to conduct experiments on feeding or other similar problems. We should be trying to solve problems through experimentation.

Under the second guiding principle lie, as has been already outlined, the various academic fields. These fields are both contentful and cultural in varying degrees for different individuals. There is no implication in this statement that the professional field and the special fields are not contentful and cultural. They are both, or at least *should have* both characteristics. Dewey's argument against dualistic tendencies in the special fields is rather convincing. Another preliminary point—this is a period of standardization which is coming to be close kin to autocracy. It does not seem to enter the mind that standardization of the threads of a bolt and of its accompanying nut is a *very different matter* from the standardization of the human mind or of a social institution. But, when we live in the age of standardization, conformity becomes a necessity.

A few illustrations may be given. Those earning degrees in some of our major fields find themselves unable to secure recognition of the majors for purposes of advanced work in the subject. This is not fair to the student. Each department should have not only the right, but should be required, to offer an amount of work for a major which is an approximation of the median requirements of institutions of collegiate and of university character. The day of the

(Continued on Page 160)

As Students See Us

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The student body of a college is the central point around which all the activities of the institution center. The faculty and administrative officers make their separate contributions to the welfare and advancement of the students. Administrative officials must guard against acquiring an attitude that makes students feel that they are being granted a favor. Teachers should make the students feel that they are giving all of their energy to help the students reach a satisfactory standard of scholarship. The students should feel some responsibility for helping the faculty and administrative officers to maintain the standards and traditions of the school. This ideal situation should be brought about without cultivating an arrogant and presuming attitude on the part of the student.

Our advisory system is centered around the director of studies in the registrar's office. All questions relating to the advancement of students toward graduation, the requirements for completing majors, the proper sequence of courses, the advisability of enrolling in out-of-grade subjects, and many other details where there is doubt in the minds of the students are answered. Members of the faculty have refrained from attempting to answer questions of this kind. It is very seldom that an instructor attempts to guide students on details that are now very

properly centralized in one office.

On the other hand, the heads of departments and the members of the faculty are responsible for the various curricula, the major subject requirements, and the sequence of courses within a particular subject group. The registrar attempts to protect the standards as set up by the departments in the catalog. Students are not permitted to vary from the curricula as outlined in the catalog without the consent of the department head concerned. A written statement signed by the department head is usually placed on file when substitutions are made.

All of this may not appear related to the problem of instruction. Reflection will convince us, however, that unless someone is vigilant in directing the work of students in a well organized manner the instructors are placed at a disadvantage in their attempts to instruct their students. Teachers have certain prerogatives that they should guard zealously. They are the final judges that decide when a student should be allowed in a class and they should be permitted to grade their students in a fair and impartial manner without interference from outside influences.

There is now some personnel information available from various sources around the institution. There has been some consideration given to a plan for centralizing personnel work and obtaining more elaborate

information. If this is done, it will entail much work and considerable additional expense. Before launching upon a program of such magnitude we must be sure that the available information will be used by the faculty to improve their instruction of students. Gathering a mass of facts about students is a complete waste of time unless used in connection with our instructional program and the work of the deans and advisors. The time and expense involved are not justified if the data are to be used only for statistical and historical purposes. If the data were used freely and skillfully it undoubtedly would be an important contribution to the improvement and welfare of the students. The question is, "Will it be used?" Members of the faculty are urged to make use of the records in the registrar's office. Data concerning grades, personal history, previous high school or college records of students, and various other personnel items are always available.

Students express themselves rather freely concerning their attitudes towards their teachers and other institutional affairs. They are human beings and have all of the characteristics of the species. Their mental and moral traits are exposed when some emergency arises that tests their fiber. The average student appreciates good teaching and good service. There are some who are very unfair to their teachers and to those who attempt to serve them. Some do not express themselves freely while others are quick to commend or speak critically as prompted by the situation. Of course, one must not take too seriously the extravagant statements that may be made under the stress of the moment. On

the other hand, teachers are subject to the same weaknesses as are the students. They do not always use discretion and, if reports of committees now at work for the standardizing agencies are true, some may be guilty of faults in their methods of instruction. It is manifestly impossible for each teacher to teach a perfect recitation every day. Even those who approach this ideal may be criticized. I think that we may say that the general opinion of the student body is a fair estimate of the success of the teacher. It is seldom that a really good teacher does not receive credit for her efforts. Professor H. H. Remmers, who is the author of one of the *Purdue University Studies in Higher Education* entitled "The College Professor as the Student Sees Him" supplied the teachers college with blanks that the students in this school might rate their teachers. These rating sheets were used in making the study along with ratings made by the students in Purdue and in the Colorado State Teachers College. In commenting on results from the three schools Dr. Remmers says:

"When the data from all three institutions—Purdue University, Colorado State Teachers College, and Indiana State Normal School—are compared as in Figure 13, it is at once apparent there is a striking agreement for the first two named; Indiana State Normal School is an outstanding exception. In view of this fact, I am led to the conclusion that these data represent a highly selected sampling as compared with the other two institutions, particularly in view of the massiveness of the Purdue data. While the general shape of the curve for the ten traits cor-

responds to those for Colorado State Teachers College and Purdue University, all the trait values are much higher—so high that, statistically speaking, the differences observed could ‘never’ occur by chance.”

Perhaps Professor Remmers is right, but there may have been other contributing factors. I refer to his statement that our data represented a highly selected sampling. All of our teachers were not rated and it is possible that our best teachers permitted themselves to be rated and that our less successful teachers recognized their own limitations and did not give their students an opportunity to express themselves, or the blanks may not have been returned when answers were unfavorable. If Professor Remmers is wrong, then we must either have teachers that are above the average and students that are more appreciative than in the other two schools or our students are less critical and less apt to say unkind things. The latter would be a doubtful compliment.

Quoting further from Professor Remmers:

“It seems unlikely—again as a matter of opinion—than any serious effects on the self-confidence of instructors resulted from the ratings. It might be argued that if the anonymous, impersonal judgments of students had the power of upsetting an instructor whose ratings were unsatisfactory as compared with the average of his colleagues, this would not be a wholly undesirable result. If one accepts the logic of the rating procedure, it is hardly consistent to maintain that the ratings should not be made if the results are unpleasant to some instructors.”

Practically all of the students

come to the registrar’s office for advice and to make requests for privileges. These requests often concern members of the faculty. During the past few months verbatim records have been kept of the remarks of students that it was thought would be of interest to the faculty. Professor Remmers is of the opinion that instructors are benefited by hearing what is said about them.

The following quotations are taken from students’ conversations:

When students are told that they must do more work to graduate than they had expected a common remark is, “The school requires us to stay in longer in order to collect more money.”

“I did my work as well or better than other members of the class, yet I failed and they passed.”

A common expression—“A certain per cent of the class must be failed so, of course, there was no chance for me.”

“The teacher is unfair in grading.”

“The teacher shows partiality.”

“Must agree with everything the instructor says.”

“Teacher is very old fashioned in his ideas, especially in subject matter.”

“Shows distrust of students at examination time.”

“He knows his subject but can’t put it across.”

“Too busy working on doctor’s degree to plan lessons.”

“Extremely nervous. Students derive no benefit from the class.”

“Uninteresting and untidy. No inspiration to students.”

“Most offensive in class. Delights in being sarcastic.”

“Shows partiality.”

"No trouble to get passing grades in his class."

"Lacks enthusiasm."

"Contradicts textbooks used in class."

"Class is absolutely dead."

"Instructor has no personality."

"Gets familiar."

"Instructor thinks his course is the only one the student is taking."

"The teacher assigns enough reading in the one course to require from three to five hours a day in the library."

"Too outspoken in class."

"A good grade was given to a certain girl because she is pretty."

"Heartily dislikes having girls in the class."

"Teacher treated us as if we were primary students."

"The teacher used terms that none of us had every heard of."

A colored girl condemned an instructor bitterly because race prejudice was shown.

"The teacher doesn't know what he is going to teach from one day to the next."

"I withdrew from class because I could not understand what the teacher said."

"The instructor spends hours criticizing another department."

"I want to change courses. The one I am now in requires hours of outside work while the other class (prepared) requires no outside work."

"I got a 'B' and never cracked a book."

You have listened to several unfavorable comments. My impression is that favorable comments predominate although they are not so likely to be remembered.

Here are a few of the complimentary expressions of students:

"I consider it a privilege to sit in her classes."

"Most interesting and inspiring."

"A great teacher."

"He knows his subject."

One must not be too sensitive to criticism. Students often do not appreciate the teachers' problems and assume critical attitudes when only the ordinary standard of work is being demanded. One must consider the fact that at ages from sixteen to twenty-one their judgments are influenced by certain biological and psychological conditions and are not as mature as in later life.

Burns' thought in his poem *To A Louse* may be helpful.

"O wad some Power the giftie gie us
To see ousrels as ithers see us!"

Few of us have a gift for seeing ourselves as others see us. All of us realize that at times we are open to criticism and regret that our actions or methods have invited criticism that might have been avoided by exercising greater discretion. It should be possible for a college teacher to sense the attitude of his class. It should be possible for a college teacher to place some kind of rating on the success or failure of a recitation.

Teachers should attempt to develop a faculty for interpreting the reactions of their students. Appearances are often deceptive. Students derive a great deal of pleasure from talking about how they can lead their teachers away from the assignment so that no embarrassing questions may be asked.

It is not my purpose to advocate a self rating scale for college teachers.

(Continued on Page 159)

The Use Of Instruction Sheets At Indiana State Teachers College

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The topic assigned the writer is *The Use of Instruction Sheets at Indiana State Teachers College*. We have, in the past few meetings, heard papers on the historical development and the purpose of our teachers college. It is the purpose of the writer to review some of the present-day discussions on the use of written instruction sheets and to try to gather from this material, as well as from some student reactions in his classes, some suggestions that might be included in the philosophy and practices of our teachers college.

Professor R. W. Selvidge of the University of Missouri states, "There seems to be a well founded conviction that the written instruction sheet is a valuable contribution to modern educational practice. The instruction sheet is a teaching device of great value where directions are to be given or where general principles or facts are to be presented to members of a group who are unequal in attainment, ability, or aptitude. It has found quite general application in the school shop, science laboratory, and in industry, but its value is not confined to these fields. It is, perhaps, the most efficient and economical system of individual instruction yet devised. It permits individual progress among the members of a group and makes it possible to take

into account individual differences."¹

When we attempt to measure the achievement of our pupils accurately, or the efficiency of our institution, we are faced with the necessity of reducing the size of our groups or devising some system of individual instruction that will provide for independent progress of the members of the group. Written instructions should provide the aid needed in this latter situation because they enable the teacher to use his time more efficiently in giving assistance only when and where it is needed. As Professor Selvidge also states, "The instruction sheet is based upon the idea that any subject or undertaking may be divided into certain fundamental units and that these units may be made the basis of instruction."

Job sheets in vocational education, according to R. H. Rodgers,² formerly of Milwaukee, have been patterned after science laboratory manuals used in secondary and higher institutions; correspondence school pamphlets and examinations; scientific studies carried on in industry as shown in factory production sheets; blue-prints used in industrial arts

¹R. W. Selvidge, *Individual Instruction Sheets*, (Peoria, Illinois: Manual Arts Press), Preface.

²R. H. Rodgers, "Job Sheets in Vocational Teaching," *Industrial Arts Magazine*, 16:119-121, April, 1927.

shops and engineering laboratories; instruction sheets prepared during the World War for training shipyard workers and men in special branches of service in the army; and the instructional aids developed in connection with the part-time school program in the state of New York. From these developments we see that written instructions, based on fundamental units, are not new but rather they represent the present status of a gradual educational development.

The kinds of instruction sheets now in use in public education are well described by Professor Selvidge.* He states that the term "instruction-sheet" is a general term applied to written or printed instructions. Special forms of instruction sheets include the operation sheet, information sheet, job sheet, and assignment sheet. Operation sheets deal with instruction units involving the manipulations we wish to teach. Information sheets deal with those units of instruction represented by simple statements of fact which one is expected to know. Assignment sheets are designed to be used in the presentation of general principles and are so arranged as to provide an opportunity for practice in their application. They are often composed largely of questions designed to direct observation, reading, and drill. Job sheets refer to those forms of instruction sheets that tell how to do a complete work job. They are especially designed to secure production, as desired in the shop or laboratory. Project or problem-analysis sheets are designed to assist the stu-

dent in listing the operations and information topics involved in a given project. They are also used to teach the student to plan the method of working out each project, as far as possible, before he starts his work. This practice tends to reduce the time needed in performing a job and develops more efficient techniques and habits in carrying each project to completion.

A discussion of instruction sheets would not be complete without reviewing the methods whereby teachers may secure these aids for use in the classroom. The problem is doubtless more complicated in the public schools than in some colleges; nevertheless the problem of securing these aids, most economically, faces teachers in both institutions. Selvidge states the problem as follows: "Since the cost of individual oral instruction is prohibitive, it is necessary to devise some other scheme that will give adequate instruction, permit individual progress, and, at the same time, be within the range of reasonable cost. The instruction must be adequate and must be available to the student when he needs it."

Since Professor Selvidge has done so much for the cause of individual instruction and has written so liberally on the topic, the writer has taken the liberty to refer frequently to Professor Selvidge's writings. In the preparation of operation sheets, Selvidge mentions, "(1) The object or purpose of the sheet should be set forth clearly in the title. An example of a title meeting these requirements is the following: How to know when to use *may* and when to

*R. W. Selvidge, "Types of Written Instruction Sheets," *Industrial Education Magazine*, 30:235-236, January, 1929.

*R. W. Selvidge, *Ibid.*, p. 235.

use *can*, an example of an English operation sheet title. (2) All steps involved in doing the thing, or act, stated in the title, should be listed and arranged in the proper sequence. . . . There may be many ways of performing the operation but the person who gives the instruction should select the way he conceives to be best for the individual he is instructing, and give that method. To give a number of ways and to leave to the student the matter of choice may reveal the versatility of the instructor but it confuses and hinders the student. This applies to the development of a skill, which is an exact habit, and not to the planning of jobs where conditions vary widely. (3) Instructions for each step should be written as simple directions for doing. Cautions for safety should always be included in laboratory activities. Instructions should be set off in separately numbered paragraphs, and all should be so clear that no doubt can arise as to what is meant. (4) Illustrations and diagrams should be used liberally. Most students read illustrations more readily than they read words and the best instruction sheets are those where good illustrations are freely used. (5) Questions, if necessary, should be included to bring out the reasons for doing things in a certain way, and to aid in making the application general. The aim of the questions is to bring out the thought process rather than the answer. (6) One or two good, available references should be included when such references add anything worth while."

Suggestions most helpful as guides in the compilation of information sheets, as suggested by Professor

Selvidge, include the following: (1) State the topic clearly and definitely in the title. (2) State briefly the facts and information concerning the topic. (3) Choose questions with the definite purpose of directing thought and discussion to the practical application of the information. (4) Give one or two good references.

Assignment sheets are used most effectively as outlines for directing reading, study, and observation, and they are of "special value in such subjects as English, mathematics, and science where much instruction may be based upon a textbook, special problems, or field work." In all such sheets the purpose should be clearly stated in the title, but the remaining form will vary depending upon the nature of the topic assigned. This form of instruction sheet doubtless finds many uses in teachers colleges, and, judging from sample instruction sheets handed the writer from department heads in this institution, is rather extensively used here. The preparation of syllabi meets the needs for assignment sheets when the syllabi are carefully compiled. The characteristics of syllabi will make helpful assignments in academic courses include: a clearly stated title for each assignment; specific references to available materials, including pages or chapters; and specific problems or questions to guide student preparation. The questions should be similar to those the instructor uses in class discussion periods.

The job sheet, as another form of instruction sheet, has an important, but rather limited, use in the classroom. In those situations where many students are asked to do the same tasks, the job sheet is the easiest means to employ in getting the

job done, according to Selvidge. This type of sheet plans the job, lists the materials needed to do the job, indicates every step the student is to follow, and explains how to do each step. The student merely follows instructions. This type of sheet probably aids the teacher most effectively in those situations where the student is expected to receive a maximum number of physical experiences in a limited time, such as is the case in many tryout or exploratory courses in our schools today. The use of job sheets means a fixed and inflexible course of study with standardized jobs and the same jobs for all students. Such criticisms, however, do not apply to instruction sheets based upon units of instruction rather than upon jobs.

In referring to some other phases of the problem of compiling instruction sheets, Dr. Bawden, of the Manual Arts Press, Peoria, Illinois, offers some suggestions pertaining to the ethics of using available printed material in the compilation of written instructions. He states, "Due to the increase in size of classes, many teachers are finding it necessary to make modifications in organization and methods of teaching industrial education which make for profitable teaching in large classes. . . . Larger classes compel the teacher to adopt some method of initiating and directing the activities of the individuals under his supervision that is economical of their time as well as his own. To keep two or three students waiting while individual instructions are being outlined to one is bad enough, but when classes are materially increased in size, carrying on by this same practice is not only indefensible from the pedagogical

standpoint, but it is excessively burdensome to the teacher.

"This teaching problem has been solved only by devising written assignments and instructions, to supplement the instructions given to the entire class at one time, and the personal directions given from time to time to the individual student. . . . It is possible through the judicious use of written instruction sheets to develop in the student initiative, resourcefulness, and ability to understand and carry out directions more effectively than through oral instructions. The publicity which has been given to this method and the satisfactory experiences of those who have given it a trial have produced an enormous increase in the demand for written and printed instruction material of all kinds, while, at the same time, the urgency of the daily crisis has stimulated many laboratory and other teachers to the preparation of instruction sheets 'on their own.'"

Because of the growing tendency to use written instructions and to draw upon all possible sources in the preparation of such material, we should be governed by a consideration of our right to use this material in developing our written instructions, states Dr. Bawden. The right granted to an author or publisher under the copyright law is well phrased in the first section of the statute of 1909 which reads: "Any person entitled thereto, upon complying with the provisions of this Act, shall have the exclusive right to print, reprint, publish, copy, and vend the copyrighted work." Com-

¹W. T. Bawden, "Ethics of Shop Made Instruction Sheets," *Industrial Arts Magazine*, 32:105-108, October, 1930.

²Statute, March 4, 1909, Section 1a.

ments on the meaning of this act state, among other things, "printing means not only printing from type or plates, but also typewriting, mimeographing, and kindred duplicating processes. Copying includes the making of manuscript copies. The exclusive right of copying is not limited to the making of exact copies . . . nor is it necessary that the entire work be copied in order to violate the copyright owner's exclusive right to copy. If a substantial part of the work, or even a small, but very important part, is copied, that is an infringement"

The motives which should govern any teacher in the preparation of written instructional material include: (1) a consideration of the property rights of others, (2) formal legal restrictions and prohibitions, and (3) common courtesy, according to Dr. Bawden. He further states that unwarranted and unfair use of copyright material might be carried to the point of discouraging the better class of teachers from compiling instructional aids for use other than in their own classes.

In attempting to find a means of providing individual instruction which allows unrestricted individual progress, many forms of instruction sheets have appeared, as have been previously enumerated. Some weaknesses in these instruction sheets show a lack of understanding of the importance of certain principles of teaching.

One common weakness of these teacher-aids is due to the fact that, under the heading of procedure or directions-for-doing-the-job, only imperative statements are given.

Such directions fail to recognize the value of the apperceptive basis for doing all manipulative as well as mental acts. The student must have some knowledge of the *how or doing* phase of an act before he can arrive at a solution of his assignment. "Our problem in teaching new students," according to Fryklund, "is deductive and inductive teaching combined. We must show the student how, pass on the fundamental things that have been gained by experience, and, at the same time, get the student to think."

Other instruction sheets which show weaknesses base instruction on questions only. This is strictly inductive and, as a method of teaching, cannot be made to function entirely alone. Another difficulty teachers have in using some instruction sheets is due to the quantity of extraneous material put into that part of the sheet designated as "directions for making." Attempted correlations should be avoided when there is danger of confusion. And, finally, the problem of student interest enters into the task of compiling and using instruction sheets. Instruction sheets which help the student learn those things which society deems advisable and that do not require the student to learn by the trial-and-error method should be effective devices for maintaining student interest and effort.

As Professor Selvidge sees the problem of using instruction sheets, "two main difficulties have developed. . . . One lies in the unsatisfactory character of many of the sheets

¹Statute, *op. cit.*, p. 96.

*V. C. Fryklund, "Instruction Sheets and the Principles of Teaching," *Industrial Arts Magazine*, 16:41-44, February, 1927.

produced and the other in the difficulty experienced by the teacher in adapting a plan of individual instruction to our present school organization." He believes, "We are gradually passing from the period of immature and ill considered efforts to a period of a clearer understanding of the philosophy. . . . that underlies them Ultimately we shall get away from the sheet that contains a lot of extraneous and confusing matter and that relieves the student of all responsibility for thinking, and get to a type that recognizes that a difference in method is required in training for thought."

More specific suggestions in the preparation of teaching plans include the following: "(1) There must be a clear and definite statement of the problem or job so that the learner will know exactly what is required. (2) On the basis of the specifications and with the analysis of the trade or course as an aid, the student should be required to analyze and plan the job. (3) The instructor should give all necessary information and directions and give a demonstration of any new process involved, if a demonstration is necessary. (4) The student should do his work according to his plan. (5) The teacher should check results. (6) The student should report on the job when completed."

An example of the improper use of instruction sheets developed in the use of the *National System of Industrial Education*. This material was prepared very accurately and in keeping with most of the suggestions

previously mentioned for operation and information sheets. It also included exercises and problems interesting to boys. The weakness in this procedure developed in the selection of teachers to supervise this work. The method commonly used was to assign teachers, during their free periods, to take charge of these classes. Such a practice meant that the student learned only what he could understand from the printed instructions, blue-prints, and illustrations.

The reasons for the development of such situations are not difficult to ascertain or understand. They should serve as warnings to all teachers who attempt to devise any written instructional aids that such material must be carefully explained to co-workers, administrators, and laymen if these devices are to yield the results intended.

As a part of the teaching plan which uses individual instruction sheets mentioned in this paper, the instructor should devise a test for each unit of the course and require each student to pass the test before he receives credit on that unit. A record of these accomplishments, posted on a bulletin board has proved most helpful in the writer's teaching experience, both in secondary schools and college. These records show achievement in the fundamental units of the course, not in the jobs or problems completed which are used to illustrate the units. The idea here being to show the student the importance of the many uses, and of the combinations in the use of these fundamental units, operations, or information topics. Such records must be kept up-to-date if they are to serve

¹R. W. Selvidge, *Individual Instruction Sheets*, (Peoria, Illinois: Manual Arts Press), p. 79.

²Ibid., p. 97.

as measures of accomplishment from day to day. If they do not serve this purpose they lose much of their value. These progress-charts also show the student that his progress in the course depends upon his own effort rather than upon the success or failure of the class as a unit.

Let us look more clearly into the advantages gained in the use of written instruction sheets. That they should be a contributing factor in a well-thought out educational program and should produce the following results, is the opinion of Van Westrienen. "(1) They should stimulate the student to worthy individual and social purposes; (2) reveal to the student the many opportunities of the course; (3) serve the needs of students of varying abilities through a variety of optional and graduated assignments; (4) enrich the experiences of students by presenting the real values in the culture of the race; (5) make all the teacher's time available for giving individual assistance; (6) serve as a solution to the large class problem; (7) relieve the teacher of many formal demonstrations and lectures; and (8) make it possible to eliminate the formal textbook by substituting several good references."¹³

Mr. G. S. Fulcher of Corning, New York, advocates, "Through the use of printed practice sheets and test sheets, present recitations can be eliminated and the chief benefits of the 'task system' obtained even in filled classrooms, and the increased efficiency and uniformity of teaching

would be worth the added cost."¹⁴

Mr. R. A. Hinderman, of Wisconsin University High School, finds, "From the use of written instruction sheets each student is enabled to work out each project in the way he finds most stimulating and effective. Some students want the instructor's aid in analyzing new problems, some prefer working them out with a fellow student, and some prefer a combination of both methods Instruction sheets encourage the student to learn and use proper terminology in work and tools used."¹⁵

Robinson suggests that the assignment sheets, "(1) help the student answer for himself, 'What ought I to know about this subject?'; (2) tend to obviate hastily and poorly written papers; (3) encourage the instructor to keep up with his semester's plans; and (4) may be used as detailed teaching plans with the addition of appropriate notes between the lines and on the margins."¹⁶

The conclusions reached by Wetzel of Trenton, New Jersey, after observing the use of instruction sheets for two years include the following: "(1) student interest is always strong; (2) each pupil may work to capacity and most of them do; (3) each pupil is always doing what he needs to do at all times; (4) remedial teaching automatically follows the failure of a student to complete each assignment; (5) the

¹³G. S. Fulcher, "Use of Printed Practice Sheets and Standardized Sheets in Teaching School Subjects," *School and Society*, August 23, 1930.

¹⁴R. H. Hinderman, "Form for Instruction Sheets in Shopwork," *Industrial Arts Magazine*, 32: 4, July, 1930.

¹⁵H. H. Robinson, "Assignment Sheets for Woodworking Classes," *Industrial Arts Magazine*, 20:350-352, October, 1931.

¹⁶H. J. Van Westrienen, "Preparation and Use of Instruction Sheets," *Industrial Arts Magazine*, 20:237-242, July, 1931.

teacher is always in the background while the class seems to be running itself. . . . Such a program requires a very careful organization and preparation of teaching materials."¹³

McDougal adds an important possibility in the use of written instructional material by stating, "No doubt there are many times in every course when the instructor finds it advantageous to present material of a local nature to his classes. Lesson sheets bearing upon these new items have a very definite value in making a course real, and the students are quick to realize it as such. The preparation of these sheets must be undertaken by the instructor, and need not be considered by him as a task too difficult, even though they include illustrations which are necessary in most instruction sheets of this nature."¹⁴

Finally, Rodgers states "Under the unit lesson organization there is little excuse for the student coming to the teacher with the statement, 'I have finished this piece of work, what shall I do next?' What to undertake next should be clearly indicated on each sheet, and when the student understands the requirements that are specified thereon, much of the delay and loss of time so prevalent in class work will be eliminated. . . . In order that the entire plan shall move smoothly, there must be provided a certain amount of storage space to keep the units in a systematic order, each instruction sheet

must be available when needed, and the students must have some means of keeping them after having worked upon them. Every teacher must also keep a progress chart that will show the location of a student and the quality of his work at any time. This enables the teacher always to make the assignments to students in terms of need. The results attained thus far by the use of this method more than warrant the continuance of intensive work concentrated upon the technique of organization and utilization in the classroom.

"Results that are already apparent where this method is being used include: (1) The instructional material for vocational classes is now better organized in all of its details than ever before. (2) Teachers are now recognizing that students are different and are offering instructions in terms of their individual differences. (3) Recognition of the individual as the unit of instruction provides the opportunity for the teacher to assign the type and kind of problem that will interest, and thereby insure, the self-activity essential to educational progress. (4) The job sheet, or unit of instruction, educationally conceived, has been a factor in enriching the course of study in the vocational subjects."¹⁵

The use that can be made of written instruction sheets is well illustrated at Hammond, Indiana. At Hammond Technical High School class lecturing and class discussion are eliminated as far as possible and written instruction sheets are substituted in all classes. Such a practice enables pupils to enter this

¹³W. A. Wetzell, "Teaching Technique and Size of Class," *School Life*, 15:181-182, June, 1930.

¹⁴W. L. McDougal, "Preparing and Illustrating Shop Made Instruction Sheets," *Industrial Education Magazine*, 32:87-89, September, 1930.

¹⁵R. H. Rodgers, "Job Sheets in Vocational Teaching," *Industrial Arts Magazine*, 16:119-121, April, 1927.

school at any time during the year, leave when conditions make this necessary, return whenever possible and take up the work where it had been discontinued at the end of the previous attendance period. Such a system of teaching requires the keeping of very careful and accurate records per pupil which is in harmony with better educational practices in all schools.

Some student reactions to the use of assignment sheets, job analysis sheets, and progress charts in the writer's classes are as follows:

"They enable me to work at my own rate."

"They show me how my ability compares with my classmates."

"They make it possible to work whenever I have free time."

"I only need to call on the instructor when I need help in understanding some principle not clear in the references."

In referring to the purpose of college instruction, Mr. J. E. Park, president of Wheaton College, states: "Every institution must justify itself by its product, . . . colleges are not exceptions to this rule. They cannot exist simply because they are on ancient foundations, they must prove to the world that they are worth while by the product which they manufacture. A college attempts to manufacture human beings. It uses the raw material supplied it by the homes and schools of the land and tries to shape it into something more vigorous and well-balanced and valuable than that which it received."¹¹

Selvidge writes, "To learn a few

specific things does not constitute an educational program, nor does a knowledge of them mean that one is educated, but we must not overlook the fact that education and proper training are ideals built upon certain desirable experiences. It is therefore the duty of the teacher to select out of our present complex life and experiences the specific things which will give the basis for the education and training desired. The teacher must look at the ideal, the structure he wishes to build, and select and arrange the experiences so as to give that result. Every experience proposed must be examined in the light of whether it will contribute to the recognized end. We must develop in the student a habit of orderly procedure and systematic work which will be of value to him in any line of endeavor. Our program should be expressed in terms of the information, the attitudes, the interests, the skills, and the habits of work we expect the student to have when he has completed his period of training."¹²

Referring to one of the most important phases of the work of a teachers college, namely, that of assisting the student in learning about efficient teaching methods, the written instruction sheet finds a valuable place because, as Professor Fryklund states: "An oral discourse on how-to-teach is of little value unless an attempt is made to connect the theories with immediate use. . . . It is probable that methods, observations, and participation should be taught together through individual

¹¹J. E. Park, "What a College Education Is Supposed to Do," *Journal of Education*, 114:143-144, September 28, 1931.

¹²R. W. Selvidge, "What Shall We Teach?," *Industrial Education Magazine*, 31:43-45, August, 1929.

instruction and participation rather than separately through group instruction. Directed observation and participation through written instructions offer a probable solution for the teacher-training problem.

"The advent of individual instruction sheets has made possible, far beyond expectation, the conduct of individual instruction and direction for study in all phases of school work. Courses in methods, observation, and participation may be carried on effectively, through the supervisor, by analyzing the content into units of instruction and then carefully writing each unit into an instruction sheet. Information and assignment sheets are very satisfactory for this purpose. The information sheet provides the knowledge that the student teacher needs in order to form better judgments in classroom management. The assignment sheet provides specifically the problem to be studied in observation, together with the necessary information, questions, and references to aid in the study. Elaborate details should be avoided in preparing instruction units, oral or written, in any kind of teaching.

"The use of instruction sheets makes possible individual conferences, whether brief or lengthy, and they also put the student-teacher in a place where he must develop his own resources. The outcome is highly satisfactory because the learner gets a better understanding of learning behavior by studying it under specific direction. The conduct of a course in methods, observation, and participation, by combining those phases into one and using individual instruction sheets, offers a more ef-

fective means of training teachers."²⁰

In addition to the advantages to be gained from the use of written instructions, as listed by the references quoted above, experience shows us that when one is called upon to put his work in writing that situation will spur one on to greater achievement and refinement in one's work than might be called forth if there was nothing in writing to which reference could be made. The use of written instructions pre-supposes a well-thought out course outline, or syllabus, composed of units on which the instructions are based. The written instructions are designed to serve as reminders, directions, and explanations, to students who do not gain maximum appreciation or understanding of a topic from an oral explanation, but who prefer to study any given assignment by referring to written explanations and directions.

If written or printed directions are used, as noted above, it is rather evident that they serve as additional helps for the teacher but that they cannot take the place of the teacher. Canned teaching is no more successful in a teachers college than elsewhere. All teachers owe it to their students to give them as many aids as possible. Written directions serve only to supplement what the instructor has explained orally, or in some other manner.

It has been the experience of the writer and teachers in the field of industrial education with whom he has been associated who use oral ex-

²⁰V. C. Fryklund, "Conduct of Student Teaching Through Individual Instruction," *Industrial Education Magazine*, 30:279-283, February, 1929.

planations, supplemented by written instructions and progress charts that the latter aids offer valuable assistance in that the student realizes that the teacher has his work well organized and planned and that he keeps a close rating on each student at frequent intervals. These teachers believe that by advertising their own applications to their job and the achievement of each pupil, much good is secured in the educational advancement of all concerned.

We are all aware of the fact that considerable time and study is required to work up any course in detail as described above. However, it has been the experience of the writer that when students realize the instructor is attempting to aid them to the best of his ability they become more interested in the course. Time can be taken to continue the improvement of a course from year to year so that it becomes stronger or more valuable each time it is presented.

Some ask how any teacher might keep such elaborate plans up-to-date, but is not such a question rather similar to the one which asks how we keep any course content material up-to-date? Certainly providing the student with detailed written assignments, designed to give each pupil the assistance he most needs, takes more effort in original compilation,

but after such directions have been thoroughly compiled the teacher has more time to keep in touch with current developments in the field. By keeping these directions in semi-permanent form, they can more readily be changed from year to year as conditions necessitate alterations.

When written instructions are used in many fields of study, the instructor may make better use of reference materials and not stress the use of a *textbook*. It seems to the speaker that prospective teachers need training in ability to search out materials on various topics in order that they may, in turn, keep their teaching up-to-date when they take up their work in the public schools. We all realize that most of us teach as we have been taught or as we remember the methods our best teachers used. Hence, if this is true, is it not fair to ask ourselves, as college teachers, why we should not put into practice in our classes what we tell our students is good practice for them to use when they commence teaching? Even if this latter practice is carried on only that our students may observe how it works, have we not made a forward move? And, if the procedure is worth mentioning in our classes, might it not be worth while to try out as a method in our classes?

AS STUDENTS SEE US

(Continued from Page 148)

Nor do I wish to propose a plan for supervising instruction. I am simply repeating some of their remarks to you without being personal or even

thinking about the persons to whom these remarks of students applied. In my position it is impossible to escape listening to students. These remarks are being passed on to the persons who are directly concerned.

THE PHILOSOPHY OF THE INDIANA STATE TEACHERS COLLEGE

(Continued from Page 144)

baccalaureate degrees as standards for teaching will ultimately be displaced in Indiana as it is already displaced in some states by the master's degree. This puts the professional training for teachers on a five year basis. Surely all junior work should prepare for senior work. Just as certainly should senior work prepare for graduate work.

A second problem lies in the allocation of work for a major. In some instances the work is almost wholly on the freshman level. This practice cannot be substantiated. Any teaching certificate should be backed by sound practice. The failure to observe such principles has long made normal schools and colleges names which connote some degree of shoddy-ness and has therefore added some opprobrium to these institutions.

I have already outlined my belief in personnel work. It might just as well be called *personal* work. Classes and masses do not solve personal problems in any considerable way. If we but gave attention to the sharp incisive way in which superintendents and principals seek for teachers—never on the basis of the classes

they have been in—but always on the basis of personal traits and achievements, we should then understand more fully the problem as it arises even on the economic level of getting a job. Not all need such attention. But the numbers who do need such attention are increasing rapidly.

The individual is the only organism. There is no such thing as a social organism. What we call organic society has a few of the ear marks of an organism, but it is not a biologic entity. We must begin with individuals, not with organizations. It is extremely hopeful to see the physical education departments and the medical department agree upon a program. But is it disheartening to see the mental counterpart of this physical program go practically untouched. When we have touched the mental organism, then we have added another needed link to our philosophy. It should not be understood that there should be any attempt to train people *out of*—away from—society, through rendering them purely individualistic. The point is that the correction of idiosyncrasies, bad habits, and the like renders one able to take one's place in society. The college gets annually a larger crop needing such attention.

The Value Of Objective Tests As A Means Of Evaluating Instruction At The College Level

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This topic which has been assigned by the committee is of considerable importance to every teacher, no matter what position he may hold, but it is of even greater interest to teachers of prospective teachers. It is with this last thought in mind that the approach to this study is made.

The report is divided into two parts. The first is a study of what the thirty teachers colleges which are approved by the North Central Association think of objective tests and how they are using them. The second part is a study of what the members of the faculty of Indiana State Teachers College think of these tests and how they are using them.

A letter of inquiry was sent to the deans of the thirty approved teachers colleges. Replies were received from twenty-three of them.

Twenty of the twenty-three teachers colleges indicate that they generally use the objective test to determine what the student knows about the course for which he registers at the beginning of the quarter or semester. However it seems evident that the majority of these tests are given to determine what the freshmen know when they knock at the door of the college for admission. The practice of using the objective test

as a means of evaluating what the sophomores, juniors, and seniors know about the subject matter of courses for which they are about to register is not generally prevalent in the twenty-three teachers colleges studied.

Twenty-one of this group of colleges use objective tests at the end of the quarter or semester to determine what the student has learned by taking the course. The two colleges not using objective tests for this purpose are located at Carbondale, Illinois, and Hays, Kansas. Dean Floyd B. Lee of Hays, Kansas writes, "We give freshmen tests the first week of the semester. . . . Our faculty has not done much at objective tests. Probably not satisfactory until the faculty members have been trained in the making and the use of objective tests."

The standardized tests are generally used for entering freshmen in these twenty-three colleges. All other objective tests are made by the professors and teachers. About half of this group make new tests for each examination, the other fifty per cent say that they are constantly revising the old tests in the light of weaknesses found by testing their tests.

The study of objective tests in individual departments of the twenty-

three colleges show that entering freshmen are generally tested in English and education. Departments of science and mathematics test freshmen in about twenty-five per cent of the colleges studied, and more than sixteen per cent of them use objective tests in departments of foreign languages. The departments of social studies rank almost as high as foreign langauges.

Individual departments of the twenty-three schools generally using the objective form for final tests show the following distributions:

Education	11
English	9
Science	7
Social Studies	5
Mathematics	3
Languages	3
Home Economics	1
Art	1
Physical Ed. (Women)	1

It is noticeable that the objective test is more frequently used with entering freshmen, than at the end of the quarter or semester, in departments of English and mathematics. It is more generally used for final testing in the departments of social studies. The departments of education and science use the objective tests as frequently in the beginning of the course as they use them for final testing of information gained.

Most of the deans indicate that the method of testing is left with the individual professor or teacher. The objective test is seldom used as the one and only method of evaluating the student's knowledge of a course.

To the invitation to express personal reaction to the use of objective tests for evaluating instruction on a college level, the deans of the

twenty-three teachers colleges gave interesting suggestions. No one expressed an opinion adverse to the use of such testing device. One spoke of the expense involved in the use of standardized tests. Many expressed conviction of the limitation of such a measurement and criticized the construction and use of tests by untrained individuals.

Some of the interesting comments are here quoted: "For admission we use high school marks, the National Intelligence Test, the Terman Personality Test, English Placement Tests, and a *personal interview*. Many types of achievement tests are used, but at the instructor's discretion."—T. E. Baker, Milwaukee, Wisconsin.

"I value tests of the objective type very highly for college purposes. More and more of the teachers in our institution are constructing and using their own objective tests and examinations."—Paul V. Sangren, Kalamazoo, Michigan.

"My reaction is that objective tests are the best measures now available for evaluating achievement. Subjective tests undoubtedly are valuable supplementary agents, but they cannot be scored justly and scientifically."—H. E. Schrammel, Emporia, Kansas.

"I believe that objective tests should be used in college as a means of determining whether the student has received the information desired in the course being offered even though there are many things that objective tests cannot measure. I think one of the best types of tests is the problem test whereby the student must search for material in order to develop the problem which has

been assigned him. Both of these types, I believe, are much better than the old essay type because the teacher can get more accurate information concerning a student's knowledge."—L. A. Eubank, Kirksville, Missouri.

"The majority of our faculty are partial to objective tests, but largely as a means for noting progress, careful study, and keeping track of each student during his course We are of the opinion that objective tests are very important and that they have found an important place as a means of evaluating student knowledge and progress."—A. J. Meadows, Conway, Arkansas.

"We believe in tests, objective and essay types, but in neither do we have faith. With us, objective means too often 'true or false.' Such tests have serious limitations. If I could get past the 'true false' obsession and see some first-class completion tests or some ingenious multiple choice, et cetera, the objective test idea would rise in my estimation."—Ralph Noyer, Muncie, Indiana.

"Better than the essay type when made carefully and according to the rules of objective test construction."—K. E. Steele, Gunnison, Colorado.

"Many objective tests are not objective especially when used by those who are untrained and inexperienced in the construction of them. What we need is teachers who have had service training along this line."—Dean of Faculty, Silver City, New Mexico.

"I am very much in favor of them. It sometimes happens that a teacher places too much reliance on the evidence obtained from a single short and not very reliable test. However,

I feel that in general those instructors who use objective tests not only do a better job of assigning grades but also do better teaching in every respect."—O. R. Latham, Cedar Falls, Iowa.

". . . . We probably need to have our courses, all college courses, organized on a definite objective basis, and then short objective tests constructed so that it would be possible to test or measure achievement on each objective covered."—N. P. Nelson, Oshkosh, Wisconsin.

Data for the second part of this study were contributed by seventy-two individual members of the college faculty of Indiana State Teachers College. An effort was made to find:

1. The extent to which objective tests are used by the faculty.
2. The types of tests used.
3. When and how tests are given.
4. How the testing results are used.
5. What personal reactions the faculty have toward this method of testing.

Almost thirty per cent of the faculty indicated that they use objective tests to determine what the students know about the courses for which they register at the beginning of the quarter. This preliminary testing is done in almost all departments, but it seems more general in departments where facts and achievements are most easily measured. In addition to the above thirty per cent, more than twenty-two per cent of the faculty indicate that sometimes they make preliminary objective tests, but they do not always do so. The objective test is not used at the beginning of courses

by twenty-eight teachers out of seventy-two reporting for this study.

A much greater use is made of objective tests in determining what the students know at the close of

Thurstone	
Blackstone	
Gregg	
Carlsons	
Elwell Toner	
Ullman-Kirby	
White	
Starch	
....	
Compass	
Otis	
Terman	
Miller	
Manson	
Brainard	
Averill	
Odell	
Wisely-Gifford	
Cross	
Barrett-Ryan	
Iowa	
Monroe and Stanford	
Thorndyke	
Sanborn and Woody	
Hunters	
Meier Seashore	
McAdory	
Iowa	
Columbia Research	
American Council	
Testing Committee	
Seashore	
....	

courses. With but one exception this method of measurement is used by this college faculty, either generally or to some extent. The large majority—seventy-four per cent—use it generally in testing student attainments.

Thirty different standardized tests are used by twenty-one teachers of this faculty. The list is given below.

Almost all departments use some standardized tests. There are but

Stenographic Tests	
Stenographic Proficiency Tests	
Shorthand Tests	
Accounting Tests	
Accounting Tests	
Latin Comprehension	
Latin Form A	
Latin Test	
Map Construction	
Inventory Test (Arithmetic)	
Educational	
Educational	
Educational	
Occupational Interest Blank for Women	
Specific Interest Form B	
....	
Principles of Secondary Education	
English	
English	
English Test	
English Test	
Rate of Reading Test	
....	
English	
Shop Tests	
Art Tests	
Art Tests	
Placement in Mathematics	
Algebra Test	
Trigonometry Tests	
Scale in French	
Musical Talent Test	
Sewing Machine Test	

three exceptions. Some departments, because of the nature of the subject matter, and because of the available tests on the market, use them more extensively than others.

Practically all college faculty members of Indiana State Teachers Col-

lege use "home made" objective tests, tests suited to the subject matter as presented in the classrooms. Eighty-five per cent of the teachers test their own tests to determine their weaknesses. However, seven professors indicate that they test only pupil activities and make no check up on their own test results. Three teachers say that sometimes they study the results of their objective tests.

Tabulations indicate that test results are most widely used in Indiana State Teachers College in helping to adapt instruction to the students' needs. Eighty-five per cent of all contributing to this study indicate that they adapt their instruction to meet the students' needs as they are indicated by the results of objective testing. The test results are used by seventy-seven per cent of the faculty in modification or revision of subject matter content, while but twenty-six per cent of this group depend upon the results for final grades. To this last group may be added fifty per cent who say that the final grade is partially determined by the results of objective testing. It might gratify some quaking students who are shortly to be weighed in the balances to know that at least some of this faculty do not resort to results of objective testing for final grades. According to this report, the uses of the results of objective testing rank in the following order:

1. To adapt instruction to student's needs.
2. To modify or revise subject matter content.
3. To determine final grades.

An effort was made to determine how long a professor uses a test before it is revised or changed. Thirty-

six per cent of the contributing group use the test but once. The following shows the reported periods of time that a test is used:

One time
Two times
Three times
One to five times
One year
Two years
Two to three years
One to two years
Two to three quarters
Several times
Varying times

The longest period is three years, the shortest is one time.

The most popular form of objective test is the mimeographed or hectographed sheet. Forty-eight, or about sixty-six per cent, of all contributing to this study say that they use this form; however, nineteen teachers dictate the tests, and six write them on the blackboard. Most standardized tests are printed.

To the last request,—"What is your personal reaction to the use of objective tests as a device for evaluating instruction on the college level?"—came interesting comments, some of which are as follows:

"A good means of finding out what the student knows about the subject matter. It also indicates teachers weaknesses and opens opportunities for her future improvement. Students are not afforded opportunity for improvement in self expression. A combination of objective and essay types is preferred."

"Valuable to test comprehension which is the basis for appreciation."

"I don't believe that objective tests reveal the true reaction to education

material as they test acquisition of facts or mere memory."

"Personally I have not used objective tests enough to have very fixed opinions, but I am not altogether in favor of them."

"They furnish the best measure that we have. They must be improved."

"I am not convinced at all of their fundamental values."

"I think it is the only scientific and trustworthy method of evaluating instruction."

"Good device."

"I don't know."

"Good for remedial purposes only."

"I think this checks retention of subject matter. It is not the best possible means of testing thinking ability."

"They are valuable in covering the entire course content, and help the student develop better study habits by preparing for these periodic checks on their understanding of the course."

"Harmless and supplementary. Easy to score if made out carefully, but tests mainly the memory. The test suggests possible answers."

"Good when constructed in the light of objectives set up for the course. They are worse than nothing when hurriedly thrown together to meet an emergency and when made without reference to the objectives set up for the course."

What is this all about? Some few facts seem outstanding as a result of the survey.

If eighty-five per cent of the faculty of Indiana State Teachers College use the results of objective testing to adapt instruction to student's

needs, and seventy-seven per cent use these results to modify and revise subject matter content, while but twenty-six per cent use these results to determine final grades, would it be advisable to follow the practice once started of giving the objective tests at the beginning of courses? This plan makes it possible to adapt instruction and to modify and revise subject matter throughout the quarter with the particular group that is tested. It affords ample opportunity for personal work with individuals and would serve the remedial purpose suggested by some faculty member.

On the whole the Indiana State Teachers College ranks favorably with the other teachers colleges approved by the North Central Association in its evaluation of objective tests. If any difference is evident, Indiana State Teachers College resorts to objective testing for individual placement of students more generally than the other colleges. However, facts may not be evident in this respect since the deans of the colleges responded and they may not have been fully aware of all that the individual departments are doing.

The suggestion from Kansas that if tests are educationally sound the teachers making them need to be trained in the making seems good advice. The dean who complains that objective too frequently means "true or false" instead of first class completion, multiple choice, or problem tests voices the opinion of the faculty of Indiana State Teachers College.

Dean Nelson of Wisconsin suggests, "We probably need to have our

(Continued on Page 170)

Around The Reading Table

Tests and Measurements for Teachers by Ernest W. Tiegs, Dean of University College, University of Southern California. (Boston: Houghton Mifflin Company. 1931. Pp. xx, 470.)

The title of this new text on measurements indicates the present trend toward the use of tests to improve instruction. However important they may be to the administrator or the director of a survey, their ultimate value must lie with their use by the teacher.

The book is designed to give a general course for beginning students who are prospective teachers. It may be used to great advantage by the teacher in service who wants to keep at the front in this rapidly changing field.

The plan of the book is rather a departure from that followed by many authors who have made lengthy descriptions of tests the chief feature. The technique of testing is most fully treated in Part I. Part II deals with using test results. Part III deals with the construction, selection, administration, and interpretation of tests. A well-selected bibliography is included with each part. The work is well written and use is made of many tables and figures. Exercises at the end of each chapter furnish stimulating reviews. The treatment of all topics throughout the text suggests that the author has had very close contact with public school work and that he has written the book for the express purpose of improving school work.

—E. L. Abell
Professor of Education.

The Elements of Classroom Supervision by Milo B. Hillegas, Professor of Education, Teachers College, Columbia University. (Chicago: Laidlaw Brothers. 1931. Pp. 224.)

Since classroom supervision is among the later developments in education, there is not agreement as to what should be included in a textbook on the subject. Professor Hillegas chooses to include in his book two introductory chapters on the origin, nature, and function of supervision; one chapter on the administrative organization for supervision; one on methods of visiting the classroom; five on observing and evaluating different aspects of classroom materials, purposes, and procedures; one on the psychology of the learning process; one on methods of dealing with the supervisor's problems; one on supervisory conferences; and a summarizing chapter. This selection of material seems to the re-

viewer to be unbalanced.

Professor Hillegas assumes, "The function of supervision is participation and guidance in the selection and organization of adequate materials to be taught and the discovery and suggestion of teaching methods that will result in more effective learning on the part of the pupils." His treatment of the subject is sound but inadequate.

A rather careful study of the volume leads the reviewer to suspect that the manuscript was prepared by the author upon the request of the publishers and that the author rather hastily assembled some ideas and materials in order to comply. This suspicion is based upon the brevity of the volume, its lack of bibliography, its lack of statistical and tabular material, and its unbalanced selection of material.

The volume probably will prove to be of greatest value as a supplementary reference for students and supervisors. It is hardly suitable for text purposes.

—J. R. Shannon.
Professor of Education.

The Administration of Physical Education, with Special Reference to Public Schools, by Jay B. Nash, Professor of Education and Chairman of the Department of Physical Education and Health, School of Education, New York University. (New York: A. S. Barnes and Company, Inc. 1931. Pp. xiii, 491.)

This volume appears to be one of the most outstanding contributions to the field of physical education to date. Special reference is made to the needs of the public schools which fulfills a long felt need.

The outstanding characteristic of this splendid work is the number of tables, forms, and maps which are used in presenting facts in the field of physical education. No less than 171 tables are listed. Invaluable aid is given the administrator and teacher in practical helps. It more than partially answers the question placed on all theory, "Does it work?"

The sociological and philosophical outlook is not neglected, however, in setting up the objectives of physical education. In unique fashion Nash says, "When we look at human life it may be viewed upon four levels, namely, the organic, the neuromuscular, the interpretive-cortical, and the emotional-impulsive. . . . Essential as these first three levels are, they may become a liability to society rather than an asset. The ranks of our gangsters and racketeers are filled with three levels of men. . . . If human progress is to be

guaranteed the fourth level must be added, namely the emotional-impulsive. The old philosophy of scholasticism has played a trick on us. We believed for hundreds of years that a knowledge of facts would guarantee behavior. . . . In order to affect behavior there must be a want, an emotional drive which results in action . . . No education is worthy of the name that does not have a contribution to all four levels."

No administrator or teacher of physical education can well afford to overlook this contribution. It would not be amiss to state that workers in other fields of education could read with profit and interest Dr. Nash's interesting chapter on objectives.

—Arthur L. Strum
Head, Department of Physical Education for Men.

Latin Prose Literature, Cato to Suetonius, by Maurice W. Avery, Assistant Professor of Greek and Latin, Williams College. (Boston: Little, Brown, and Company. 1931. Pp. xii, 400.)

There are several books on the market that cover the poetry of Latin literature, but this is, perhaps, the first book which limits its scope to prose. In the preface the author says that he was guided by two main considerations in his choice of selections: "They must be as interesting as possible to the average undergraduate and they must be worthily representative of their author." Mr. Avery has succeeded very well in attaining these two purposes. His field of selections is quite comprehensive, covering the long period from Cato, the father of Latin prose, about 200 B. C., to Suetonius in the second century A. D. The number of pages allotted to each author is reasonable in view of his importance to literature: Cato, 4; Varro, 4; Cicero, 43; Caesar, 23; Sallust, 12; Nepas, 7; Livy, 26; Seneca Rhetor, 4; Vellius, 4; Curtius, 10; Petronius, 8; Seneca, 20; Quintilian, 5; Tacitus, 17; Pliny, 12; and Suetonius, 10.

There are 253 pages of text, followed by 145 pages of notes. The notes are adequate in that they regularly give the setting and background of the selections discussed, and help the student to interpret the unusual words and the more difficult passages by translating them. There is a place for a book of this kind in the college Latin course and Mr. Avery's book seems to supply a need.

—Frederick H. Weng
Head, Department of Latin and German.

Diagnostic and Remedial Teaching by Leo J. Brueckner, Professor of Elementary Education, University of Minnesota, and Ernest O. Melby, Professor of Education, Northwestern University. (Boston:

Houghton Mifflin Company. 1931. Pp. xviii, 593.)

The authors have presented here a comprehensive work for use in the elementary field. The emphasis throughout is on individual differences and the use of tests in diagnostic and remedial work. While tests are fully described and illustrated their practical use as means to an end is kept in the background in the treatment of every topic.

If education is to become a science it must be through an ever finer technique in the use of better instruments of measurement. The thorough way in which the authors analyze school situations and prescribe remedial work should make this book of great value to every elementary teacher. All the elementary subjects are treated in the one volume and the chapter on diagnostic and remedial work in character education is outstanding. Choice references and lists of most commonly used tests are included.

—E. L. Abell
Professor of Education.

Elementary School Life Activities, Volume I, All-School Activities, and Volume II, Group-Interest Activities, by F. C. Borgeson, Associate Professor of Education, New York University. (New York: A. S. Barnes and Company, Inc. 1931. Vol. I—Pp. xiii, 143; Vol. II—Pp. xiii, 135.)

Within the past six years, several volumes of educational literature dealing with extra-curricular activities in the junior and senior high school have been published. Recent authors have recognized the place of these activities in the elementary school.

Dr. Borgeson has presented in the two volumes of *Elementary School Life Activities* the result of his active interest in and his direction of school life activities, of correspondence with scores of principals and teachers, of an inquiry which reports practice in 524 schools in all parts of the country, of studies and reports of university students, and of a canvass by university students of all literature appearing since 1925 that in any way deals with elementary school life activities as defined by the author. In Volume I he defines the term elementary school life activities—"be they curricular or 'extra-curricular,' to connote pupil experiences in which assuming responsibility, making decisions, directing activity, and securing pleasure by the children themselves, are of major importance." Here, he describes and gives splendid examples of those pupil experiences that have to do with the school as a whole—home room activities, school management activities, drives, campaigns, assemblies, and special day celebrations.

Those pupil activities particularly related to special group interests, such as trips

and excursions, clubs, publications, athletics, social activities, and activities sponsored by cooperative organizations are presented in Volume II.

The books are very readable. They fill a long felt need of principals and teachers in vitalizing elementary school work.

—Lenna E. Smock
Assistant Professor of
Education.

Health Through Projects by G. D. Brock.
(New York: A. S. Barnes and Company.
1931. Pp. xii, 268.)

This volume is a common-sense presentation of health topics and methods useful to a teacher of health education. It attempts to break away from formal teaching and make use of the child's activities through projects. Interest, initiative, and usefulness seem to be the bases of Brock's philosophy. The discussion of the many health topics is interesting, full of common sense, and free from technicalities, but contains nothing new. The facts are scientific, made understandable but important. Many of the topics discussed will be of genuine service to the teacher because these materials were difficult to collect, i. e., Safety Education.

Following each topic is a list of aims, objectives, and attitudes worthy of consideration and a list of projects. These the thoughtful teacher may well consider. The use of these projects or others they may suggest will stimulate interest.

The references included in the text are carefully selected and useful. Suggested correlations are thoughtfully selected. The different score cards are helpful. In fact, the whole text is one of much work.

—Fred Donaghy
Professor of Biology.

Problems in Educational Psychology by Walter J. Gifford, Head, Department of Education and Psychology, State Teachers College, Harrisonburg, Virginia, and Clyde P. Shorts, Associate Professor of Education, State Teachers College, Harrisonburg, Virginia. (Garden City, New York: Doubleday, Doran & Company, Inc. 1931. Pp. xiv, 728.)

This is a unique book in that it consists of a compilation of excerpts from a great many authors on a great variety of subjects—philosophical, psychological, neurological, biological, pedagogical. It deals with the meaning of education, biological foundations of education including heredity and environment and endocrinology, motivation in behavior, instincts, the psychology of learning, individual differences, tests and measurements, growth of personality, mental hygiene. It undertakes to give the student an idea of each of these subjects by brief quotations from various experts in

the several fields. As a reference book it has a place in the educational field. As a textbook it would seem impossible. One wonders what the beginning student's state of mind would be after being carried through this maze of varied material. Isn't there also danger of giving the student a false sense of security in acquainting him with a smattering of such a great variety of subjects so fundamental to an intelligent understanding of a human being and his or her education? Can we boil down many of these fundamental sciences so completely that the beginning student is able to secure enough knowledge from a paragraph or two quoted from an entire book to guide him in the complex and intricate process of educating a human being?

—Rudolph A. Acher
Professor of Education.

Mind-Body Relationships edited by Jay B. Nash, Chairman, Department of Physical Education, New York University. (New York: A. S. Barnes and Company, Inc. 1931. Pp. viii, 276.)

A. S. Barnes and Company has published two volumes of a series of five, which series will attempt to present an adequate interpretation on physical education and health. The final volumes have been promised in May, 1932. The volumes are edited by Jay B. Nash, chairman of the department of physical education, New York University. This fact alone bespeaks the value of the series. The titles of the books are: *Mind-Body Relationships*, *The Nature and Scope of Examinations*, *Character Development*, *Physiologic Health*, and *Professional Preparation*.

Mind-Body Relationships is the subject of the first volume, the one here reviewed. This is a compilation of a series of lectures delivered at the dedicatory exercises at the School of Education, New York University, February 27 and 28, and March 1, 1930. These are scholarly addresses delivered by expert students of physical education and health. The speakers have not failed to glean facts from every field of human thought and endeavor. Throughout the whole volume is the idea that physical education educates the whole child rather than isolated parts and then reassembles these parts to make an unified whole. The idea that the finest qualities of human life are developed as well as the student's physical body is clearly shown, that is, the whole child is educated. This makes education total. In this respect physical education makes a valuable contribution to life and may well feel content with its contribution to general education. This volume discusses rather fully the physiological basis of physical education. The relation of physical education and health to bio-physics, biochemistry, character, personality, and ad-

ministrative subjects is well discussed. This volume is of intrinsic worth to the administrator and classroom teacher because it deals with the total outcome of education. The entire volume is well worth while even to the general reader.

—Fred Donaghy
Professor of Biology.

Nature and Scope of Examinations edited by Jay B. Nash, chairman of the Department of Physical Education, New York University. (New York: A. S. Barnes and Company, Inc. 1931. Pp. 307.)

The central theme of this book—that mind and body constitute an inseparable unit, and the impossibility of separating physical and mental activities if we are to realize desirable outcomes in physical education programs—is a continuation of Volume I of this series of interpretations of physical education mind-body relationships.

The editor states in his preface that the purpose of the volume is to present various types of tests, examinations, and procedures which are necessary to determine the condition of the individual so as to protect him and society and, at the same time, serve as a basis for educational guidance. Twenty-five outstanding experts in their respective fields have contributed chapters in the development of the central theme.

The subject matter has been organized

under four headings: Part One, Introduction, deals with what constitutes full living and the part which physical education has to play in such living. Part Two, The Status of the Individual, is developed by the answers to such questions as, "What should be known about an individual, the organic status, the neuro-muscular status, the emotional status, the personality of the individual from the standpoint of health?" Part Three discusses the nature and scope of the health examination which the physical educator can make. This section is of particular interest dealing as it does with conditions which the physical education teacher can and should be able to recognize. Part Four, The Administration of Examinations, deal with the relationships of the physical director to other examining experts, with the training in physical education necessary to perform examinations, and with the administrative problems involved from the standpoint of the state, the city, and the county school systems.

The book is scholarly and scientific, and should be of inestimable value to every physical education teacher as well as to the administrator concerned with making the most of his physical education program.

—Florence Curtis
Head, Department of Physical Education for Women.

THE VALUE OF OBJECTIVE TESTS AS A MEANS OF EVALUATING INSTRUCTION AT THE COLLEGE LEVEL

(Continued from Page 166)
courses, all college courses, organized on a definite objective basis and then short objective tests constructed so that it would be possible to test or measure achievement on each objective covered." Such an arrangement would be testing on an objective basis.

It is the composite opinion of the twenty-three colleges studied and of the seventy-two faculty members of Indiana State Teachers College that objective tests, carefully constructed, thoughtfully revised, and cautiously used, play an important part in evaluating instruction at the college level, but how best use the results?

THE PHILOSOPHY UNDERLYING INSTRUCTION IN NORMAL SCHOOLS AND TEACHERS COLLEGES

(Continued from Page 138)
not materially from that of President Parsons; taken from *The Professional Preparation of Teachers for American Public Schools*, by Learned, Bagley, McMurry, Strayer, Dearborn, Kandel, and Josselyn—names to conjure with in the educational field, it states the teacher-training school's job as:—

1. Professional training as such in:
 - a. Psychology.
 - b. History of education.
 - c. General method.
 - d. School management.
 - e. Practice teaching.
2. Training in academic subjects at the level at which the teacher will teach those subjects.